

What is claimed is:

- 1 1. A system for providing self-installing software components for
2 network service execution, comprising:
 - 3 a basic communication framework established with a service host system
 - 4 executing a network service software component to provide a network service;
 - 5 a checking mechanism to determine availability of the network service
 - 6 software component and to verify prerequisites against a runtime environment
 - 7 through the service host system; and
 - 8 a helper mechanism to execute a code bundle providing the network
 - 9 service software component through the service host system logically grouped
 - 10 with installation instructions for the network service software component.
- 1 2. A system according to Claim 1, further comprising:
 - 2 a set of well-known methods provided through a public interface defined
 - 3 on the network service software component.
- 1 3. A system according to Claim 2, wherein the well-known methods
2 are selected from the group comprising at least one of an availability method,
3 environment verification method, code retrieval method, and an update method.
- 1 4. A system according to Claim 1, wherein the network service
2 software component is updated through the service host system.
- 1 5. A system according to Claim 1, further comprising:
 - 2 an installation predicate object defined on the service host system to verify
 - 3 that the runtime environment satisfies prerequisites necessary to install and
 - 4 execute the network service software component.
- 1 6. A system according to Claim 5, wherein the installation predicate
2 object is implemented in at least one of mobile code for execution within a
3 managed code platform and in platform-specific native code.
- 1 7. A system according to Claim 1, further comprising:

2 a helper object defined on the service host system to locate and obtain
3 copies of one or more of the network service software components necessary to
4 satisfy one or more of the prerequisites.

1 8. A system according to Claim 7, wherein the helper object is
2 implemented in at least one of mobile code for execution within a managed code
3 platform and in platform-specific native code.

1 9. A system according to Claim 1, further comprising:
2 an update object defined on the service host system to identify, retrieve
3 and install any updates to the network service software component.

1 10. A system according to Claim 9, wherein the update object is
2 implemented in at least one of mobile code for execution within a managed code
3 platform and in platform-specific native code.

1 11. A system according to Claim 1, wherein the network service
2 software component in the code bundle is implemented to offer functionality
3 substantially equivalent to the network service provided by the service host
4 system.

1 12. A system according to Claim 1, wherein the network service
2 software component in the code bundle is implemented to offer functionality
3 differing from the network service provided by the service host system.

1 13. A system according to Claim 1, wherein the basic communication
2 framework comprises a Java operating environment.

1 14. A method for providing self-installing software components for
2 network service execution, comprising:
3 establishing a basic communication framework with a service host system
4 executing a network service software component to provide a network service;

5 determining availability of the network service software component and
6 verifying prerequisites against a runtime environment through the service host
7 system; and
8 executing a code bundle providing the network service software
9 component through the service host system logically grouped with installation
10 instructions for the network service software component.

1 15. A method according to Claim 14, further comprising:
2 specifying a set of well-known methods provided through a public
3 interface defined on the network service software component.

1 16. A method according to Claim 15, further comprising:
2 defining the well-known methods selected from the group comprising at
3 least one of an availability method, environment verification method, code
4 retrieval method, and an update method.

1 17. A method according to Claim 14, further comprising:
2 updating the network service software component through the service host
3 system.

1 18. A method according to Claim 14, further comprising:
2 defining an installation predicate object on the service host system to
3 verify that the runtime environment satisfies prerequisites necessary to install and
4 execute the network service software component.

1 19. A method according to Claim 18, wherein the installation predicate
2 object is implemented in at least one of mobile code for execution within a
3 managed code platform and in platform-specific native code.

1 20. A method according to Claim 14, further comprising:
2 defining a helper object on the service host system to locate and obtain
3 copies of one or more of the network service software components necessary to
4 satisfy one or more of the prerequisites.

1 21. A method according to Claim 20, wherein the helper object is
2 implemented in at least one of mobile code for execution within a managed code
3 platform and in platform-specific native code.

1 22. A method according to Claim 14, further comprising:
2 defining an update object on the service host system to identify, retrieve
3 and install any updates to the network service software component.

1 23. A method according to Claim 22, wherein the update object is
2 implemented in at least one of mobile code for execution within a managed code
3 platform and in platform-specific native code.

1 24. A method according to Claim 14, further comprising:
2 implementing the network service software component in the code bundle
3 to offer functionality substantially equivalent to the network service provided by
4 the service host system.

1 25. A method according to Claim 14, further comprising:
2 implementing the network service software component in the code bundle
3 to offer functionality differing from the network service provided by the service
4 host system.

1 26. A method according to Claim 14, wherein the basic
2 communication framework comprises a Java operating environment.

1 27. A computer-readable storage medium holding code for performing
2 the method according to Claim 14.

1 28. An apparatus for providing self-installing software components for
2 network service execution, comprising:

3 means for establishing a basic communication framework with a service
4 host system executing a network service software component to provide a
5 network service;

6 means for determining availability of the network service software
7 component and means for verifying prerequisites against a runtime environment
8 through the service host system; and
9 means for executing a code bundle providing the network service software
10 component through the service host system logically grouped with installation
11 instructions for the network service software component.